

Research on Course Teaching Reform of “Engineering Project Management” Based on OBE-CDIO

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Fund Project: 2020 Hubei Arts and Science College Teaching Research Project (JY2020043)

Abstract: With the development of society, OBE-CDIO education concept has been paid more and more attention by schools. This paper first summarizes the OBE-CDIO teaching concept, and analyzes some problems existing in China's higher education. Based on the OBE-CDIO education concept, it puts forward a series of improvement measures, such as strengthening the construction of teaching staff, scientifically formulating the talent training objectives of “Engineering Project Management”, optimizing the curriculum design, etc., so as to give a small contribution to better cultivate engineering management technicians.

Keywords: Project Management; OBE-CDIO; Course Reform

With the continuous improvement of China's economic level, enterprises have higher and higher requirements for the quality of students, especially the practical ability of students, and even expect students to meet the requirements of enterprise posts in the internship stage. In addition, the development of network technology and computer science has changed the traditional office mode, and people pay more attention to team cooperation. The advantages and disadvantages of project management will directly affect the normal operation of enterprises, and its importance is self-evident. Therefore, the school should strengthen the teaching work of “Engineering Project Management” course, cultivate students' theoretical and practical ability of project management, so as to better serve enterprises and society.

1. An overview of OBE-CDIO teaching philosophy

OBE is a kind of education mode based on learning output. The education mode mainly emphasizes the subject status of students and the achievements obtained by students through learning. Students' learning achievements are the final evaluation standard of teaching activities. CDIO represents the conception, design, implementation and operation, that is, in teaching activities, comprehensive design experiments are used as the carrier to cultivate students' practical ability, communication and coordination ability and engineering literacy. OBE-CDIO teaching concept points out that schools should pay attention to students' practical ability and learning achievements in teaching activities. Teachers can not follow the traditional teaching mode in teaching activities, should give full play to the role of guidance. At the same time, they should understand the ability requirements of enterprises for students, set scientific teaching objectives, so as to make rational use of teaching resources, improve teaching efficiency and quality, and lay a solid foundation for students' future employment.

2. Problems existing in current teaching mode

At present, in the daily teaching process of colleges and universities in China, theoretical courses and professional courses

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doi: 10.18686/ahc.v5i1.3119

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are often taught. After completing the theoretical knowledge of the corresponding modules, teachers carry out classroom practice or practical training teaching. In the whole teaching process, teachers mostly provide technical support for students, and students play their own role through students' classroom or practical training. In the process of performance, it's necessary to understand students' learning progress, and to correct errors in time, so as to ensure the teaching effect. Some shortcomings of the traditional teaching mode need to be improved.

2.1 The training of students is out of line with the needs of employers

There is a disjointed phenomenon between the training of students and the needs of employers. It is mainly manifested in the fact that the development of computer technology has broken the traditional way of office and project management. Employers will use some project management software to manage engineering project management, which requires students not only to have a solid theoretical foundation, but also to have excellent computer technology and good team cooperation ability. In addition, the formulation of teachers' teaching objectives is not fully considered, only to follow the teaching theory of books to carry out teaching work, lack of the process of combining with practice, and the effect of practical training is not ideal.

2.2 The degree of teaching modularization is low

At present, when the school carries out teaching, it is often to explain the whole course first. After the explanation is completed, the training course is carried out at the later stage of the course teaching. In the arrangement of theoretical courses and experimental training courses, the degree of modularization is low, which leads to the difficulty in the allocation of class hours, and it is unable to give full play to the professional level in the experimental training. In addition, the integration of practical knowledge and skills system and professional core curriculum knowledge points is low, which can not enable students to practice quickly after mastering theoretical knowledge, and can not reflect students' learning achievements.

2.3 Informatization teaching means need to be improved

At present, most schools in our country have begun to use multimedia teaching, but the personalized needs of students are not reflected, especially when students are learning the engineering project management course, due to the differences of student and ' understanding of the course. Teachers need to carry out teaching according to the students' individual differences to improve the teaching quality.

3. Teaching reform path of engineering project management course based on OBE-CDIO

3.1 Scientific formulation of talent training objectives

Based on the teaching concept of OBE-CDIO, the school should first formulate professional training objectives according to the market demand. On the one hand, the school should strengthen the investigation, and constantly optimize the teaching content of project management course according to the graduation destination of students over the years and the demand of market talents, so as to improve the professional knowledge level of students. On the other hand, the school should actively cooperate with enterprises to provide rich internship opportunities for students by integrating social resources. Students can be more aware of their own shortcomings through internship, and they will be more purposeful in learning professional knowledge and improve students' learning outcomes. In addition, the school should make clear the training objectives in the curriculum standards, so that students can understand the significance of mastering the course when learning the course.

3.2 Optimizing the training curriculum

As the saying goes, practice leads to true knowledge. Theoretical teaching can make students understand some techniques and means of engineering management. However, without practical training, students will lack engineering experience and be at a disadvantage in employment competition. In order to better improve students' theoretical and practical ability, school teachers should modularize the course of project management, so that students can learn quickly and efficiently, and also contribute to the design of training courses. Teachers can carry out practical teaching in different stages according to different modules, which helps to combine theory with practice and improve students' digestion and absorption of theoretical knowledge. In addition, when teachers carry out practical teaching, they should carry out teaching in the way of task leading.

On the one hand, task guidance can stimulate students' interest in learning to enhance students' participation. What is more, in terms of teaching methods, teachers can first introduce the process and key points in the theoretical course, so that students can participate in all aspects of project management, and can more clearly understand their own tasks and responsibilities.

3.3 Optimizing teaching evaluation system

Under the concept of CDIO education, school teaching and training curriculum evaluation needs to break the traditional evaluation method, not only focusing on examination results. Schools need to pay attention to the learning effect of students in the whole learning process and cultivate their professional knowledge and team cooperation ability. In the process of optimizing the teaching evaluation system, the school should consider the students' learning process, examination results and practical training results comprehensively. At the same time, according to the actual teaching process, comprehensively consider various factors, and dynamically adjust the weight of students' process performance, examination results and training results, so as to realize the scientific evaluation of students' learning achievements and school teaching quality.

3.4 Strengthening the construction of teaching staff

Most of the teachers in our country have been engaged in teaching since graduation. In teaching, teachers have rich theoretical knowledge, but due to the lack of practical operation in enterprises, the phenomenon that teachers' theory and practical ability do not match. Therefore, schools should actively carry out teachers' practical training, strengthen teachers' practical ability, so as to improve teachers' comprehensive quality. In addition, because the school enrolls students every year, and the number of students increases year by year, but the growth of teachers is slow, which leads to the phenomenon of weak teaching staff. In view of this situation, the school should strengthen the construction of double teacher team. On the one hand, it should strengthen the cooperation of production, learning and research with enterprises, and improve the practical ability of teachers through enterprise projects. On the other hand, schools should strengthen the recruitment of talents by recruiting some experts and scholars with rich practical experience from the talent market, so as to improve the teaching quality and do a good job of talent reserve.

4. Conclusion

In a word, with the development of the times, OBE-CDIO education concept has gradually penetrated into school education. On the one hand, the school should combine the characteristics of engineering project management course, optimize teaching methods, and formulate scientific teaching objectives, on order to constantly optimize the proportion of theoretical courses and practical courses, and cultivate students' practical ability. On the other hand, we should constantly strengthen the talent reserve work, and improve the teaching evaluation system, so as to make the evaluation more scientific and reasonable. At the same time, we should meet the needs of enterprises and promote the employment of students. The implementation of OBE-CDIO education concept helps to improve students' comprehensive quality and improve the quality of school education.

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